

CLAIMS

The invention is hereby claimed as follows:

- 5 1. A gaming device comprising:
 - at least one display device;
 - at least one memory device;
 - a processor adapted to retrieve from the memory device data which represents a plurality of graphical images and to generate the graphical images on the display device; and
 - a display frame defined by the display device, said display frame having predetermined dimensions,
 - whereby at least one of the graphical images specified by the data has at least one dimension which is larger than one dimension of the display frame.
2. The gaming device of Claim 1, wherein the memory device includes a plurality of image buffers.
- 20 3. The gaming device of Claim 1, which includes varying screen depths associated with each graphical image.

4. The gaming device of Claim 1, which includes varying Z-level positions associated with each graphical image.
5. The gaming device of Claim 1, which includes an XY position associated with each graphical image.
6. The gaming device of Claim 5, wherein at least one of the XY position is adapted to change with time.
- 10 7. The gaming device of Claim 1, which includes a velocity associated with at least one graphical image.
8. The gaming device of Claim 1, which includes at least one animation defined by the plurality of graphical images.
- 15 9. The gaming device of Claim 1, wherein the data includes pixel values.
10. The gaming device of Claim 9, which includes transparent pixel values.

11. The gaming device of Claim 1, which includes means for detecting collisions of graphical images.

12. The gaming device of Claim 1, whereby the display device is
5 adapted to display at any one time a portion of at least one of the graphical images, wherein said graphical image is larger than the display frame.

13. The gaming device of Claim 12, wherein the larger graphical image
10 is a background image.

14. The gaming device of Claim 12, which includes a velocity specified for the larger graphical image.

15 15. The gaming device of Claim 12, which includes a changing position specified for the larger graphical image.

16. The gaming device of Claim 1, wherein said dimensioned graphical image includes a plurality of sections.

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17. The gaming device of Claim 16, wherein said sections are modular.

18. An improved gaming device including a processing unit adapted to communicate with a memory device, at least one buffer memory device, a display processor and at least one display device which includes a display frame wherein the display frame is adapted to display, at any one time, at least one graphical image, wherein the improvement comprises: said graphical image being specified to have at least one dimension which is larger than at least one display frame dimension.

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19. The improved gaming device of Claim 18, wherein said specified graphical image includes a plurality of sections.

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20. An improved gaming device including a processing unit adapted to communicate with at least one memory device and at least one display device including a display frame, said the processing unit adapted to generate at least one animation by displaying a plurality of graphical images simultaneously, wherein the improvement comprises: at least one 15 of the graphical images having a size which requires that only part of the graphical image be displayed on the display frame at any one time.

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21. The improved gaming device of Claim 20, wherein said sized graphical image includes a plurality of sections.

22. A method of enabling a player to view a gaming device animation, said method comprising the steps of:

- (a) retrieving from a memory device, data representing a plurality of graphical images, said data specifying at least one of the graphical images to have at least one dimension which is larger than at least one display frame dimension;
- 5 (b) transferring said data to image buffers, each of which is associated with a graphical image; and
- (c) displaying at least part of certain graphical images on a display frame.
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23. The method of Claim 22, which includes the step of displaying a plurality of graphical images simultaneously.

15 24. The method of Claim 22, which includes the step of displaying the graphical images at different screen depths.

25. The method of Claim 22, which includes the step of moving at least one graphical image.

20 26. The method of Claim 22, which includes the step of retrieving data from a memory device representing graphical images of various sizes.

27. The method of Claim 22, which includes the step of retrieving data representing at least one background graphical image having a size larger than a display frame dimension.

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28. The method of Claim 22, which includes the step of retrieving data representing at least one background graphical image having a size larger than all other graphical images.

10 29. The method of Claim 27, which includes the step of specifying a velocity for the background graphical image.

30. The method of Claim 27, which includes the step of specifying a changing XY position for the background graphical image.

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31. The method of Claim 27, which includes the step of causing the background graphical image to appear to be moving.

20 32. The method of claim 27, which includes the step of moving the background graphical image.

33. The method of Claim 27, which includes the step of maintaining the background graphical image in a static condition.

34. The method of Claim 33, which includes the step of moving at least 5 one graphical image, other than the background graphical image.

35. The method of Claim 22, which includes the step of creating an animation.

10 36. The method of Claim 22, which includes the step of creating an animation by moving at least one graphical image.

15 37. The method of Claim 22, which includes the step of conserving computer memory by creating an animation by moving one graphical image instead of generating a plurality of frames of graphical images in succession.

20 38. The method of Claim 22, which includes the steps of transferring pixel values to the image buffers and transferring pixel values to the display processor.

39. The method of Claim 22, which includes the step of maintaining transparent pixel values in the image buffers.

40. The method of Claim 22, which includes the step of providing a
5 screen connected to said display processor.

41. The method of Claim 40, which includes the step of causing said screen to appear to move.

10 42. The method of Claim 22, which includes the step of enabling a player to determine the direction in which said graphical image moves.

43. The method of Claim 22, which includes the step of enabling a player to evaluate the velocity at which said graphical image moves.

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44. The method of Claim 22, wherein step (c) includes the step of displaying at least one section of at least one graphical image, wherein said graphical image is larger than a display frame dimension.

20 45. The method of Claim 22, wherein step (c) includes the step of displaying at least one section of at least one graphical image.

46. The method of Claim 45, which includes the step of retrieving transparent data which represents certain sections of certain graphical images.

5 47. The method of Claim 46, which includes the step of transferring said transparent data to certain image buffers.

48. A method of enabling a player to view at least one animation on a gaming device, said method comprising the steps of:

- 10 (a) retrieving from a memory device, varying depth orders associated with a plurality of graphical images;
- (b) retrieving from a memory device, a plurality of pixel values representing the graphical images, at least one of said graphical images having a dimension which is greater than at least one display frame dimension;
- 15 (c) transferring the values to at least one frame buffer;
- (d) transferring the values associated with each graphical image to at least one display processor, in order of decreasing depth; and
- 20 (e) displaying the graphical images, image-by-image.

49. The method of Claim 48, wherein step (d) causes the pixel value transferred to a particular frame buffer location to replace any pixel value previously transferred thereto.

5 50. The method of Claim 48, which includes the step of displaying a plurality of graphical images in succession.

51. The method of Claim 48, which includes the step of animating at least one graphical image by displaying a plurality of graphical images in 10 succession which consist of variations of such graphical image.

52. The method of Claim 48, which includes the step of causing such graphical images to appear to be layered on a display device.

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53. A gaming device comprising:

at least one display device including a display frame having predetermined dimensions;

5 at least one memory device including pixel data associated with at least one graphical image which is larger in size than the at least one display frame dimension; and

processor means for accessing said memory device to obtain said pixel data, processing said pixel data and sending signals to said display device based on said processed pixel data.

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54. The gaming device of Claim 53, wherein the graphical image has at least one width dimension which is greater than at least one width dimension of the display frame.

15 55. The gaming device of Claim 53, wherein the graphical image has at least one height dimension which is greater than at least one height dimension of the display frame.

20 56. The gaming device of Claim 53, which includes a movement specification associated with the graphical image.

57. The gaming device of Claim 53, which includes a scrolling specification associated with the graphical image.
58. The gaming device of Claim 53, which includes a velocity specification associated with the graphical image.
59. The gaming device of Claim 53, which includes a changing XY position associated with the graphical image.
- 10 60. The gaming device of Claim 53, which includes a Z-level specification associated with the graphical image.
- 15 61. The gaming device of Claim 53, which includes a boundary specification associated with the graphical image.
62. The gaming device of Claim 61, wherein the boundary specification specifies a boundary larger than at least one of the display frame dimensions.
- 20 63. The gaming device of Claim 53, wherein only a portion of the graphical image is visible on the display frame at any one time.

64. The gaming device of Claim 53, wherein the memory device includes pixel data representing a plurality of graphical images.

65. The gaming device of Claim 53, wherein at least one of the
5 graphical images is associated with a scalar movement specification and
at least one of the graphical images is associated with a non-scalar
movement specification.

66. A method of enabling a player to view at least one animation on a
10 gaming device, said method comprising the steps of:

- (a) retrieving from a memory device dimensional data for a graphical image, said data specifying the graphical image to have a dimension which is larger than at least one display frame dimension;
- (b) retrieving from a memory device movement data associated 15 with the graphical image;
- (c) enabling a processor to write pixel data associated with the graphical image; and
- (d) displaying various portions of the graphical image as time elapses.

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67. The method of Claim 66, which includes the step of retrieving from a memory device Z-level data associated with the graphical image.

68. The method of Claim 66, wherein step (a) includes the step of retrieving width data.

5 69. The method of Claim 66, wherein step (a) includes the step of retrieving height data.

70. The method of Claim 66, wherein step (b) includes the step of retrieving scrolling movement data.

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71. The method of Claim 66, wherein step (b) includes the step of retrieving velocity movement data.

72. The method of Claim 66, wherein step (b) includes the step of retrieving XY position movement data.

15 73. The method of Claim 66, which includes the step of retrieving pixel data representing a plurality of graphical images.

20 74. The method of Claim 73, which includes the steps of retrieving different Z-level data for at least two graphical images and displaying at least part of each said graphical image simultaneously.